



CONSUMER PRODUCT SAFETY COMMISSION

[Docket No. CPSC-2023-0013]

Notice of Availability: Proposed Draft Guidance for Estimating Value per Statistical Life

AGENCY: U.S. Consumer Product Safety Commission.

ACTION: Draft guidance; notice of availability.

SUMMARY: The Consumer Product Safety Commission (Commission or CPSC) is announcing the availability of proposed draft guidance for CPSC's staff on the application of the Value of Statistical Life in the agency's cost-benefit analyses, and in particular for its regulatory analyses. CPSC seeks comments on the proposed draft guidance.

DATES: Submit comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: You can submit comments, identified by Docket No. CPSC-2023-0013, by any of the following methods:

Electronic Submissions: Submit electronic comments to www.regulations.gov. Follow the instructions for submitting comments. Do not submit through this website: confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public. CPSC typically does not accept comments submitted by e-mail, except as described below.

Mail/hand delivery/courier/confidential Written Submissions: CPSC encourages you to submit electronic comments by using www.regulations.gov. You may, however, submit comments by mail, hand delivery, or courier to: Office of the Secretary, Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814; telephone: (301) 504-7479.

Instructions: All submissions must include the agency name and docket number. CPSC may post all comments without change, including any personal identifiers, contact information, or other personal information provided to www.regulations.gov. If you wish to submit confidential

business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public, you may submit such comments by mail, hand delivery, or courier, or you may e-mail them to: cpsc-os@cpsc.gov.

Docket: For access to the docket to read background documents or comments received, go to www.regulations.gov, and insert the docket number, CPSC-2023-0013, into the “Search” box, and follow the prompts.

FOR FURTHER INFORMATION CONTACT: Alex Moscoso, Associate Executive Director, Directorate for Economic Analysis, U.S. Consumer Product Safety Commission, 4330 East-West Highway, Bethesda, MD 20814; telephone: 301-504-7782; email: amoscoso@cpsc.gov.

SUPPLEMENTARY INFORMATION:

I. INTRODUCTION

The Value per Statistical Life (VSL) is a widely used parameter in cost-benefit analysis, including regulatory analysis, which represents an individual’s willingness to pay for reducing their risk of fatality. VSL values a reduction of fatality risk in monetary terms to be used for cost-benefit analysis. VSL is not an attempt to place a value on any individual life. Instead, government economists typically apply VSL in regulatory analysis to measure the welfare impact of policies that reduce or increase fatalities.

The CPSC’s Directorate for Economic Analysis (EC) is responsible for conducting all economic analyses for the agency, which includes regulatory analysis. Regulatory analysis may include a cost-benefit analysis of a proposed regulation. EC regularly uses VSL in its regulatory analyses of CPSC regulations. While the U.S. Office of Management and Budget and some executive branch agencies and departments have published guidelines on the application of VSL for their purposes,¹ CPSC is not subject to those guidelines. This NOA describes proposed

¹ The U.S. Department of Transportation (DOT), U.S. Department of Health and Human Services (HHS), and U.S. Environmental Protection Agency (EPA) all recommend default VSL estimates in their official guidelines. The Office of Management and Budget provides general best practice guidance (OMB Circular A-4) to Federal executive branch agencies on regulatory analysis, including discussion of issues related to estimating VSL. While Circular A-4 recommends avoiding age-adjustment factors due to mixed evidence on age and VSL, it should be

guidelines for CPSC staff on the application of VSL for cost-benefit analysis, and in particular for the Commission's regulatory analysis.² Specifically, the draft guidance will establish for CPSC staff a standard source for estimating VSL as well as guidelines for adjusting VSL for inflation, changes in real income (i.e., controlling for inflation), sensitivity analysis, and discounting.

Among other elements, the proposed draft guidance document prescribes a VSL estimate specifically for children. Government economists often apply VSL uniformly to all fatalities that fall within the scope of the regulation being assessed. This approach has the advantage of simplicity. However, it systematically underestimates benefits for regulations that reduce fatality risk to children. It is widely observed that society prioritizes the safety of children and invests significantly in child safety. Examples include the large investments made on child safety such as the baby-proofing industry,³ safety caps on over-the-counter medicines,⁴ and the certifications and licensing required for daycare centers and schools to promote child safety. Consistent with this, Congress has provided CPSC special statutory mandates to protect children.⁵ Research on individuals' willingness to exchange money to reduce fatality risks to children appears to align with these societal preferences.⁶ The draft guidance document defines an elevated VSL for children to more accurately assess the benefits of regulations that protect children from deadly outcomes.

noted that since OMB published Circular A-4 (September 2003) 20 years ago, there has been new research studying an age-adjustment factor for children's VSL, including Robinson et al. (2019).

² The Commission voted 4-0 to approve publication of this notice. Commissioner statements in connection with this vote are available at: https://www.cpsc.gov/s3fs-public/RCADraftFederalRegisterNoticeofAvailabilityProposedGuidanceforUsingValueofStatisticalLife.pdf?VersionId=5I3jGkZymDY8qdMwPzqMSM_fim8M49TM.

³ \$14.21 billion market in 2022. Business Wire, "Baby Safety Devices Market Research Report 2022 - Global Forecast to 2027", May 16, 2022, <https://www.businesswire.com/news/home/20220516005546/en/Baby-Safety-Devices-Market-Research-Report-2022---Global-Forecast-to-2027---ResearchAndMarkets.com>.

⁴ Poison Prevention Packaging Act of 1970, Pub.L. 91-601, (84 Stat. 1670).

⁵ See, for example, Title I of the Consumer Product Safety Improvement Act of 2008, Pub.L. 110-314 (122 Stat. 3016), entitled "Children's Product Safety."

⁶ Robinson, L., Raich, W., Hammitt, J., & O'Keeffe, L. (2019). Valuing Children's Fatality Risk Reductions. *Journal of Benefit-Cost Analysis*, 10(2), 156-177.

II. DISCUSSION

This notice provides background on relevant work CPSC has done to understand the issue of child VSL; describes the current practice of using VSL in regulatory economics, both at CPSC and in other government agencies; explains CPSC's reason for issuing VSL guidelines; puts forward draft guidelines for CPSC staff's use of VSL; and requests public comment on these draft VSL guidelines.

The draft guidance does not discuss the valuation or averted costs associated with reducing non-fatal injuries. Some federal agencies and departments estimate their values or averted costs associated with reducing non-fatal injuries as a function of VSL. CPSC, however, determines the averted costs of reducing non-fatal injuries through its Injury Cost Model, independent of VSL.⁷ Therefore, the draft guidance does not change CPSC's injury cost estimation approach.

A. Background

VSL is usually derived from willingness to pay studies. These studies either use surveys to investigate individuals' willingness to exchange their own income for a change in their own risk, or examine real world behavior that reflects this trade-off, such as the change in income associated with a change in job-related risk. Individual willingness to pay estimates from these studies are then converted to a VSL estimate by dividing by the risk change. For example, if a group of 10,000 individuals were willing to pay \$900 each to reduce their risk of death by 0.01 percent in a given year, then in the aggregate that group of individuals would be willing to spend \$9 million⁸ to reduce the risk of one additional fatality in that given year. These studies usually estimate the value that adults place on reducing their own risk of fatality. Inherently, individuals' willingness to pay is a function of their real income, wealth, and other personal factors as well as the characteristics of the risk.

⁷ For information on how CPSC estimates the cost of injuries, see: <https://www.cpsc.gov/s3fs-public/ICM-2018-Documentation.pdf>.

⁸ \$9 million = \$900 ÷ 0.01% reduction in fatality = \$9 million per expected death averted.

This approach cannot be used with children, who do not control financial resources and may not understand or be able to express their willingness to pay for such reductions. Furthermore, assigning the same VSL for adults and children ignores the evidence, noted above, that society values the safety of children more than adults. Failing to acknowledge the importance of child safety within society runs the risk of undervaluing the public benefits of regulations that protect children, potentially resulting in insufficient investment of resources to protect the very lives of those whose safety society values most.

CPSC is an independent Federal agency tasked with protecting consumers from unreasonable risk of death and injuries from consumer products. Many of the agency's regulations reduce the risk to children of death and serious injury. Furthermore, CPSC's statutory authorities (such as sections 104 and 106 of Consumer Product Safety Improvement Act of 2008, Public Law 110-314, 122 Stat. 3016) and policy statements (such as 16 CFR 1009.8(c)(6)) direct the Commission and its staff to place a higher priority on preventing product related injury to vulnerable populations, which include children. Therefore, CPSC has a statutorily based interest in estimating a VSL for children and ensuring it presents a comprehensive assessment of the benefits from regulation.

In 2018, Industrial Economics Inc. (IEc) conducted a literature review of studies estimating a VSL for children and drafted a report for CPSC that described its findings.⁹ IEc found that “[t]he number of studies that explore the value of reducing children's risks has increased substantially in recent years. The results of these studies are diverse, but generally suggest that the value individuals place on reducing risks to children is greater than the value of reducing risks to adults”.¹⁰ In 2019, the group of co-authors, including the authors of this report published an update of the literature review in a peer-reviewed journal with some modifications

⁹ Industrial Economics, Inc. “Valuing Reductions in Fatal Risks to Children”, January 3, 2018, <https://www.cpsc.gov/content/Valuing-Reductions-in-Fatal-Risks-to-Children>.

¹⁰ Ibid.

from the 2018 report.¹¹ These studies found five publications that satisfied many of their evaluation criteria, which showed VSL for children exceeds the VSL for adults by a factor of 1.2 to 2.9, with a midpoint of roughly 2.¹²

Since these studies, CPSC has published three regulations in the *Federal Register* (FR) aimed at children’s safety that included cost-benefit analysis: Safety Standard for Magnets (87 FR 57756), Safety Standard for Operating Cords on Custom Window Coverings (87 FR 73144), and Safety Standard for Clothing Storage Units (87 FR 72598). While all three of the regulatory analyses estimated benefits that came primarily from preventing death and injury to individuals under 18 years old, CPSC used VSL based on adults. However, in the cost-benefit analyses of custom window coverings and clothing storage units, CPSC also used child-to-adult VSL ratios from these studies as part of the sensitivity analyses to evaluate the impact of an elevated VSL for children.

B. Federal Agency Practice

The EPA, DOT, and HHS each have formal guidelines for estimating VSL within their agency. EPA derives its estimates from 26 studies, of which 21 are wage-risk studies.¹³ DOT primarily addresses injury-related risks and derives its VSL estimate exclusively from wage-risk studies, which also address injury-related risks.¹⁴ HHS bases its VSL estimates on six wage-risk studies and one meta-analysis of these studies, as well as three stated preference studies.¹⁵ Table 1 displays the values of all three agencies’ VSL, adjusted to 2021 dollars and income levels for comparison.

Table 1: U.S Federal Agency Central VSL Estimates (2021 dollars and income levels)

¹¹ Robinson, L., Raich, W., Hammitt, J., & O’Keeffe, L. (2019). Valuing Children’s Fatality Risk Reductions. *Journal of Benefit-Cost Analysis*, 10(2), 156-177.

¹² See citation in footnote 9.

¹³ U.S. Environmental Protection Agency, “Guidelines for Preparing Economic Analyses”, 2010, <https://www.epa.gov/environmental-economics/guidelines-preparing-economic-analyses>.

¹⁴ U.S. Department of Transportation, “Treatment of the Value of Preventing Fatalities and Injuries in Preparing Economic Analyses”, 2021, <https://www.transportation.gov/sites/dot.gov/files/2021-03/DOT%20VSL%20Guidance%20-%202021%20Update.pdf>.

¹⁵ U.S. Department of Health and Human Services, “Guidelines for Regulatory Impact Analysis”, 2016, <https://aspe.hhs.gov/reports/guidelines-regulatory-impact-analysis>.

EPA	DOT	HHS
\$11.3 million	\$11.8 million	\$11.6 million

CPSC has routinely used EPA’s VSL estimate in the benefits assessments of its regulatory analyses. Specifically, CPSC adjusts EPA’s base VSL for inflation to the year of the analysis using the Bureau of Labor Statistics’ Consumer Price Index. Then, the inflation adjusted VSL is multiplied by the number of estimated deaths. This generates a monetized value of benefits from the fatality risk reduction associated with the proposed rule. When the analysis projects the regulation’s impact into the future, CPSC additionally discounts all monetized future costs and benefits, including the value of prevented deaths, to account for the time value of money.

C. Reasons for Establishing the Proposed VSL Guidelines

CPSC regularly assesses the costs and benefits of proposed regulations that address safety. By developing and publishing guidelines for its staff’s use of VSL in regulatory analysis, CPSC can: (1) help ensure that its regulatory analyses appropriately measure the benefits from reduced fatality risk, including children’s mortality; (2) improve consistency across regulatory analyses regarding the valuation of benefits for reducing fatality risk; and (3) promote transparency by sharing these guidelines with the public and gathering comments on the guidelines.

To further these goals, the proposed guidelines establish the source, base value, and method of application for VSL. The proposed guidelines also establish a ratio of child VSL to adult VSL.

III. SUMMARY OF THE PROPOSED VSL GUIDELINES

CPSC seeks public comment on its proposed VSL guidelines, which are fully described in the draft guidance. The proposed guidelines state that:

1. CPSC staff will use HHS’s VSL estimate for adults.
2. CPSC staff will double the adult VSL to establish the child VSL.

3. When adjusting the VSL, CPSC staff will account for changes in both the general price index (inflation) and real income using the method in HHS’s *Guidelines for Regulatory Impact Analysis*.
4. CPSC staff will include in regulatory analyses a sensitivity analysis that use both high and low estimates for adult and child VSLs.
5. When estimating VSL in future years, CPSC staff will discount the resulting benefit values to reflect the time value of money, consistent with its approach for all cost and benefits estimates.

These guidelines and their sources are summarized in Table 2.

Table 2: Summary of CPSC VSL Guidelines

Variable	Guideline
Adult VSL	\$11.6 million in 2021 dollars as of January 1, 2023. Based on HHS's VSL Guidance. CPSC will update this value as HHS updates with new VSL value.
Child VSL	\$23.2 million in 2021 dollars as of January 1, 2023. Double the adult VSL. Doubling the VSL is based on findings from IEC’s “Valuing Reductions in Fatal Risks to Children” and Robinson et al. (2019).
Inflation	Inflate to year where full annual data is available for price (inflation) and real income. Use data and formula in HHS VSL guidance.
Discount	Apply discount rate to all monetized values that are a function of VSL in future years.
Real income index	Use Current Population Survey Median Weekly Earnings for initial adjustment to year of analysis. For future years, use real earnings per worker growth rate from the Congressional Budget Office’s Long-Term Budget Outlook. ¹⁶
Income elasticity	Use value from HHS VSL guidance.

CPSC seeks public comment on the proposed VSL Guidelines, including specifically the following:

- The criteria and studies included in the IEC and Robinson et al. reviews, as well as any

¹⁶ Congressional Budget Office, “The 2022 Long-Term Budget Outlook”, Real Earnings per Worker (2022-2052) in Table B-1, 2022, <https://www.cbo.gov/publication/57971>.

new studies;

- Alternative approaches for adjusting VSL for age.
- The estimation of VSL in these guidelines, especially child VSL.
- Any other applications of VSL that CPSC should address in its proposed draft guidance.

and

- Any other general comments on child VSL and CPSC's proposed draft guidance.

The proposed guidance is available at: <https://www.cpsc.gov/s3fs-public/ProposedDraftGuidanceforEstimatingtheValueperStatisticalLife.pdf?VersionId=YZhzsWkIsHuhzNVm8VmTFwxsjbbIuvw0>. The staff's briefing package on this matter is available on CPSC's website at: <https://www.cpsc.gov/s3fs-public/DraftFederalRegisterNoticeNoticeofAvailabilityProposedGuidanceforUsingValueofStatisticalLife.pdf?VersionId=QiWpCy7L9AvI17U.Mo3s.CyRkUdM2INf>.

Alberta E. Mills,

Secretary,

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